```
gtagagcaat tatcccagtc tttaaaactg gatatgaatg agattcaccc tgacgaatcc 5100
tttgccgatt atggtgttga ttccattacc ggtgctagtt ttattcaaca gcttaatgac 5160
acgctgacac tgactttaaa gacggtgtgt ttgtttgatc acagctcggt aaaccgactg 5220
acggcctatc tgttatctga ctatggtgat gatatcgcgc agtggttagc aacggcacca 5280
gcgttggttg atcatccaca gagtgtcgtc agtcaggtgt tgcctgaaag gtcgccagca 5340
agcacacaag ccaagccctt gccttcagtc cccccttcgt tatcgatgga gtcacccgtt 5400
caacaggagt cgatagcgat tattggtatg agcggacggt ttgcggcgtc agaaaacctg 5460
gaagcgtttt ggcaacagtt ggcacagggt gtggatttgg tcgaacccgc gtcacgttgg 5520
gggccacaag cggagactta ctacggcagt tttctcaagg atatggatca atttgatcct 5580
ctcttttta atctctccgg tgtggaagcg agttatatgg accgcaaca acgttgtttt 5640
ctggaggaat cctggaatgc actggagaat gcgggttatg tgggtgatgg catagaaggc 5700
aagcggttgtg gtatttatgc cggttgcgtg tccggtgact acgcacaact gttgggcgac 5760
caaccccgc cccaggcttt ttggggcaat gccagttcta ttattcccgc ccgattgcc 5820
tattatttaa atcttcaggg ccctgctacc gcggtggata ctgcctgctc aagttctctg 5880
gtgcggtgc atttggcctg ccaggcccta cacctggatg aaatggagat ggccttggca 5940
ggaggtgtgt ctctttatcc aaccccatc attgtatgag tctttgcgtg gtgcagatat 6000
```

FIG. 22K (cont'd)

SEQ ID NO:30

```
ancaatttat nacatccncg ggaaaaanacg atntaggcag gcattgcggc      60
caacggttat tttttaaat  gagttaacca  aaaaagngtt tttgnagtgt aaattggttt 120
gncganggtt ggccttattt aananaggga  ttgngtattc nttggttac  gggttatttc 180
ctaacagtgc aancggtact gaggcgtcgg  gcaaccaacg gtgaatttcc gctccatgac 240
gctcgtgagt tgggtcaaca cccatgcaag  ccaagagatt cccatgcgaa cgttgtagcg 300
atcttgcgac atcggtgatt gatcatgccc  gccatccgcc ccaagagatt gaggtcagca 360
tggataaaaga gtagccatga tgccatgatg aaggcatcgg tcaaacagtt gttggtagag 420
caattatccc agtctttaaa actggatatg  aatgagattc acccctgacga atcctttgcc 480
gattatggtg ttgattccat taccggtgct  agtttttattc aacagcttaa tgacacgctg 540
acactgaytt kraagackkt gtgtttgctt  gcgcagtggt cggtaaaaccg actgacggcc 600
tatctgttat ctgactatgg tgatgatatc  gcgttgcctg tagcaacggc accagcgttg 660
gttgatcatc cgtcagtcag cgtgttgcctg gtgttgcgcg aaaggtcgcc agcaagcaca 720
caagccaagc cctttgcttc agtcccccct  tcgttatcga tggagtcacc cgttcaacag 780
gagtcgatag cgattattgg tatgagcgga  cggtttgcgg cgtcagaaaa cctggaagcg 840
tttttgcaac agttggcaca gggtgtggat  ttggtcgaac ccgcgtcacg ttggggccca 900
caagcggaga cttactacgg cagkttyctc  atcaatttga aggatatgg  tcctctcttt 960
tttaatctct ccggtgtgga agcgagttat  aacaacccgc atggacccgc tttttctggag 1020
gaatcctgga atgcactgga gaatgcgggt  tatgtgggtg atggcataga agcaagcgt 1080
tgtggtattt atgccggttg cgtgtccggt  gactacgcac aactgttggg cgaccaaccc 1140
ccgccccagg cttttttgggg caatgccagt tctattattc ccgcccggat tgcctattat 1200
ttaaatcttc agggccctgc taccgcggtg  gatactgcct gctcaagttc tctggtggcg 1260
gtgcatttgg cctgccaggc cctacacctg  gatgaaatgg agatggcctt ggcaggaggt 1320
gtgtctcttt atccaacccc natcattgta  cctgtgccsa cgtggtgcag atatgctctc 1380
ttcgaggggg ngctttgatg taaaacgctt  cggtatcgtc cggtatcgtc attkgtgaat 1440
ggggggggk  cgttgccaca ggtgnggngc  tttggccgga tttggccgga tggcnaatca 1500
tattcacgga gtgattgctg gcagtggtat  cggtcgtagt caantcaaaa aamtgggaat 1560
acgggcaccc agtgcmcaaa tscaaagaac  gcttggwaac gttgggttnt atgatcgctt 1620
tgdtgyyaac cttkagcaha tkagcatgkt  cgaaggccvd tggacaggc  acgrgdytta 1680
```

FIG. 22L

```
ggtgkacccc arttgaayrt daaacyttam accggvggt  ttagacactw adacgsaata 1740
aagaahaatd htgvgchatc gsgtcggcnc aaaaccaata tgggamacyg gsaccatggt 1800
wggctgggtd tgggggcctt gtkkgatrt  kkaaagntgg tgttgtcgat gcaacaccgg 1860
caaaatacct ccatcgctac atttactca  ggcaatccg  aatattgact ttgatcgcag 1920
tccttttat  gtgaacaccg agcttcgtga ttggtcgtga ggtgaaggag agaccgtttg 1980
tgcgacggtg agcgcctttg gatttagtgg taccaatgcc catgcagtga tagaagaagc 2040
gccgccagtc gtgcgccaac atgaagagca gccgggttat ttaagtggtc ttatcggcgc 2100
atagtgatga tcaattacgg cagcaaggtt gagaactta  tgcgggttat tgtgagcatc 2160
accctgagtt ggatgtgggc aartcytgag rttatacctt attgnttggg ntcgtcaaca 2220
ttggntcgca tcgtctggct ggtgntggcg tngtgatctt gaggatttgc ggcggtcact 2280
ggatcagtgg nttggtcag  ggtaaggctc ccgagtgta  tgtngtctng canttggctg 2340
agggtgaacc acngtctanc aagtttctct acagcacgtt ggtaatgaat gtataagagc 2400
antgcagtga gtcctgttct gcgaatcact atgtggacgc gttatcgacg gtggggawt  2460
tatatgttca gggttatcca ttggagtatg gtgtgttgtt tgsccakggc watrrwcktw 2520
ttsskttkcc gamctakssg tttscwarkc agcgttgttg ggtaccacaa acaataagcc 2580
actccacagt ggatgctata tcacagcatg cttttttaca tccttgtta  catcgaaata 2640
cttcggactt ttcatgtcag cgttttagct ccacatttaa tgggagtgaa tttttcttta 2700
ctgaccacct tattctaggc aaaaagatat tgcccggagc cgmtymtttc gaaatggtcc 2760
gagaggccat caaacaagct tgtggatttt tggataattc tgaagttgtt attcagctca 2820
atgatattgt atggacaaaa gtgattgcag ttgatgatga tatcaaagaa gtacatattg 2880
atcttttttg tagaaaatgg cagtgaatca tgcttaacgc atgagtttga taggcaaaac 2940
atatcgctta actatgaagt ttatacgcaa aatagtgagg gaaatggcag gcagaataaa 3000
aaaattattc ataatcacsg catggtcacc ttgagtttct ttgaatacaa ccggaggttg 3060
tagatcttga tgaactacsc mgccmctata aatcaascaa gtcttanatg ctgaacaaat 3120
gttatttga  gtttggaatc aatargtgtt cakwwtggtg acaggcmccg atgtatarat 3180
acsgtwtatw tcggtgagca tcaagtatta rcmaaactyt ytwtgccaga aattgcagga 3240
gawttggata artscttgt  tttgcaccca ggcatggtag attctgcttt acaggccaca 3300
ttgggtatta cttctgatat caatgatatc atgttagccg atcgccaagc cgattatatc 3360
```

FIG. 22L (cont'd)

```
ttgacccca  agtcgacgct  tcccttgct   ctkgwmaaas  tkkaawtway  ysgaaaaygt  3420
wcagattcta tgtgggtttg  gattckaaat  tctttatcga  cagaccasaa  gtctccacgc  3480
tcagcccgtt aatgatatac  acatctcga   cattgatcta  ttggacgctc  aaggaaaagt  3540
atgtgtgcga atgcgaggtt  tcttgtctcg  ggtttgccc   aaacaatggt  taattcacta  3600
scagaagaac cgtttacagc  tttgaataac  cagcaagcac  cnttacttt   tccaatccca  3660
ggtatggcgt tncgccagac  tcttatccaa  gtggccaatt  aaccctacct  taawtgatgc  3720
ccggtccatc cttggggtgg  ttgtacgnat  ttgaaatatg  gacttaatgt  agaaaataga  3780
aggatgtaga ggtttattga  cctacactc   ccaaaccact  tggatttaca  ggatcgctac  3840
ttgtgatatt tgcactgcag  gtatttgaaa  ttgtaaaang  acgtaatgat  agataaatcc  3900
gtacaaccag tactgattca  gttgttagtt  cctaatgatg  gagaacaagg  ggtattcacc  3960
agtttattgg cattactaaa  ggtggctcgc  tcagaaaacc  ccaaagtgat  tacacaatta  4020
attcaagtac aatagtcccg  caaacctcgc  aaaatttact  acggattatc  actgaaaata  4080
gtcatgatat aacacatgca  gaaattcgtt  atcacttggn  atcaacgtga  atgtttgktt  4140
tggkaascag taccaaatc   tacaaaacy   ttactcaact  ccctggaaat  ctaacagwgt  4200
ttatytcwtt mcgggaggka  ccggtggaat  tagcgtcaca  gtttgtcaaa  gcgwtagcag  4260
tgagtcccac aaaatcggta  ttaatcttkg  taggkcsktc  accactcmat  grtgaaaaga  4320
aatcttawtt aactagaact  ggratccgtt  ggggaccat   tattaawtmc  tatcaraacr  4380
gatgtaagcc aacanggatc  aagttaaagc  wttgwttaaa  raaattkttc  ascawtmcgg  4440
tcaattgaaw ggkgktttsy  attgtgcagg  tattgtcaac  gacaatttta  ttctcaaaaa  4500
gtcctcgaca gaatacaaag  aggtattgtt  gtntaaagta  tcnggtnctg  tcaatttaga  4560
ccaggcanca canagnatag  agatggattt  tcttatnnta  ntaaaaacgt  tatctgcagt  4620
attcggannn acagnacagg  gtnttagata  atngtccaaa  tacttttcc   aggtgttggg  4680
taaanggggat tggaanccaa                                                 4700
```

FIG. 22L (cont'd)

SEQ ID NO:31

```
gcncttnccg cggtggcggc cgctctagaa ctagtggatc cccgggggctg cagtattcgg   60
aaatgcaggt caatcagatt attcaacggc aaataaattt atggatgagt ttgcacgcta  120
tcgtaatgct ctggtcaatc gcaaagagcg ctatggttta acactatcga ttaattggcc  180
gtactggaga gaaggaggta tgagtattga ggaaaatttt gaaaatataa tgcaagagaa  240
taccggtatg tccgccctgg agacatcaca aggtattgaa gtattacaaa gagcttggca  300
gttgcagtac acgcaattgt tggtaatggt cggagagatg aagcgaatgg agagcttttt  360
gcacaagcag ggtttcgagc agattcctgt ggtatccgcc gatactgtca gcgagaataa  420
aacctcgact attgagaatc tttcagccga tgtagataca ttaccattca ttgaggttca  480
ggcatacaat atggaacaaa aaacccttga ttacttaaaa aatgtatttg ccaccacaac  540
acaaatcccc gagaaaaata tttatgttca tgaaacattg gataaatacg gagttgattc  600
attgttggtg atgaaaaatga ccaatcaatt ggaaaaagta tttggaaaat tatctaaaac  660
cctatttttt gaatatcaaa ccattcgcga actgggcgat tatttcctga aatttcatga  720
tgaaaagtta agggagtttt ttcagataga tagcaaacta tctatgttaa ataatcacgg  780
agagattgaa gttcaaaaaa aagggggatga accatcggtt ggagacagat ataagtcagc  840
tggatgccgt gcctatctcg gtttatatcg cctgtgtcag cagtgaatca tcaaccaaaa  900
aaatgttaac aatggttccm atantcatca gccagtaatg ggatattggc gawtattggg  960
tctgagkggg tcgttattcc mcaagcctga gaaatatngg agggaatact ggggaagaaa 1020
tttgtgtcaa nggcaaggga ctggtattan ccaaanggag ccgttgggga 1080
ttggsaagac tattwyacms mtnnngatcc stattcagcc mggtgggaca tcgcagtaaa 1140
tnggggkggt tttattcggg atgttgataa gttcgatccg ttattttta atatttcccc 1200
tagkgrggkg gagctyrcts atcctcagga aykwttattt yctagrgtcc gcgtkggctg 1260
cattggaaga ccctggawat tgccgggnat tatttgcaa tgttgtcatc aaggactaaa 1320
tcttcattct cgtcggraga tgttggtgtt tatgtggrag tratgtcttc agaatatcag 1380
ttgtttgctt ttgaacagaa wttacgtggt cacccatat cctcnggttg ggagttatgc 1440
cagtattgct cttatgtttt aratctacac nggcccaasc atgacagtgg 1500
atmcgatgtg ttaacgacgc twcacctagc atgkcaggga tttaaaactg 1560
ggkcgaaact ttgkcggkgg agttaawatt accattcacc ccmataaata 1620
tyaggcsctg aaattattty tactagtggt sgttgccaaa rtttggtgtga 1680
```

FIG. 22M

```
acaggacag  ggttatatcc  ctggtgaagg  agtgggtgcc  ataatactga  agcgcttggt  1740
cgatgccgag  cgtgacggtg  atcatattta  tggtgttgtt  aaaggcagtg  ccgttaacca  1800
tggtggtaaa  accaacggct  ataacgttcc  taatccgaat  gcacaacagc  aagtggtgag  1860
tcgtgcacta  cgagaagccg  cagtaaaccc  ccatcatgtg  acttatattg  aggcacatgg  1920
aacaggaacc  caattgggtg  accgataga   aattactgkt  ctrammaaag  cgttcaatag  1980
tttgaccaat  gagcttggtt  taagcgctgt  gsccaaacma  tygkgtttga  tcggstcark  2040
gaagtcaaaa  tatagggcat  tgtgagycas  caagccggtg  ttgcagctat  tagcaaagta  2100
ttgttacaaa  tgcaacacgg  gtcaaatagt  ccctccttta  cattcaaaag  cattgaatcc  2160
caatattgat  tttactgtga  ctcccttgt   agtaaaccaa  gggttattgg  actggaaacg  2220
acttgaagtt  gaaggaaaga  gcccatgtag  aatkgctkky  mwwwckkytt  ttggggccgg  2280
tggctcaaat  gcccatgtag  tgattgagga  gtacgttgcc  agcaatgaaa  agcaagagga  2340
ttttcaagga  aaagtaatta  tcccctttatc ggcwatagac  ttskgatcar  ctacaaraaa  2400
warkggatcg  tttgcttaag  tttatcraaa  aaaatgaagc  aaaraggtag  ggaawtksgc  2460
ttaattgwty  ttgccgwawa  cattgcaact  tgggcgcgag  gtcaatgara  ggaacgtctg  2520
gncmttngan  ttgtaggaat  cnaataccaa  atgcttaang  gaaagatttt  agcaaaggnt  2580
ttaaatactc  agaaaatnga  tgcacanatt  tttcggatac  ttatcaaaag  rcatttttatc 2640
ggggttcgta  ctagacctgg  gtgcgttgra  tttcgctatt  tttctgaag   atgaagaata  2700
tggccaacac  gcttgatatt  ttggattcaa  aaaggtaaat  actttaagnc  tggcgggagct 2760
ttgggtaaaa  ggtgtgacta  ttgattggaa  taaatggtat  aacgcattat  taacccagaa  2820
taaatatttg  aaaccntcgt  cgtattagtt  tgccnaacng  tatccttttt  ccagggatcg  2880
ttattggatt  nccnaagtgc  ttttccacaa  ncaaacattt  tctacagtaa  ttgaggcaga  2940
cgccaaccma  aacattgaat  gagctactgt  gttttgaaga  aaaatggcag  gtgcaatcgg  3000
aactacatga  ctctgttgca  gatcaatcta  atgttatcaa  tacattaatt  tgtttttttaa 3060
ctgagaaaga  gcatcaaaaa  gcattacaac  aatcaatatc  attccatagc  ccgaaaacac  3120
gattgatttt  tatcagccag  gctcaggctt  atgagcagta  ttcatcagat  cactatgcgg  3180
ttaatccaga  aataggaaag  acgtaccaac  aggctttttca acacattgtg  aaaagtattc  3240
ataaaagtga  tgtcacggac  ataatgtatt  tatgggctct  agaggatgaa  cgctggatta  3300
cgtctcctct  acctattgta  tatcttttaa  aaagtattga  ggtttcttta  ttaaaaccar  3360
```

FIG. 22M (cont'd)

```
aaaaattact atttgttgga gaatttaaga caagcttakc rrcgaytgty acyykraakc 3420
cwrgkkgggw ttygmamrwy ckkwaksgtt dgtgcaacsg ratwtkragg ttgcggtgtt 3480
attaraggcm rtggaaggta ctyaatccca tmcagtgaca aagcaaatgg atctttggat 3540
agaaaaattg tggtcgtcct taaaaagccca aaaagttcat agtagcttat accaaaatgg 3600
tcgtagatat ttttctgaaa accccamccg ctgcaanctt gtcatgaacc aaagtattca 3660
aatgcttaca gggracttta ttgataacag stgsytgtgr aggactgggt tttgtcttyg 3720
cagattattt ttccaagaca tataaaatta atctgatatt ggttgggcgc tctgatcttg 3780
ataaagagaa agswwtcgsr ratwcrgrmt ykgkwwmaat caggtagtcg agtggcttat 3840
gttcagacgg atatctgcga tgaaaagaat ctccaattgg aattggatat tgcccaaaaa 3900
tattgtggcc ctattcaggg tgtcattcat gccgcgggca tcattgatca gaagacaatt 3960
tttgaaaaaa gtcctgaaaa ctttcaagca gtattagccc ntaaaattca gggtacattg 4020
attctggata acgtattgtc agcgcaatca ctggatttta tatgttactt ttcttcaagc 4080
tcggctctat taggtgatgc aggatcatgt gattatgcaa tggctaatcg atttttgatg 4140
gcccatgcac agtatagaaa tacctyggta tctgaargaa aamscaaggg raagacmctg 4200
kttwttcatt ggcccgcctg gaatgtgaaa ggaatgggat tgaatgggact ggaatgagaa 4260
cgtgaaamca ragttctwty ttaagtccaa gcgggcaasg tctattggac ataaaggaag 4320
gttgtgaggt tattgaacac attrctggct caggattatt ytcagtgtcy tawattggst 4380
ggkaggaaaa accngtatcw aacaattttt tgggtctcac acaaagatgt ttctnacctc 4440
acaagtgagt caagggcagg magtrawgaa cwwasrrswk kmykkrrass ksyamyaaac 4500
gagctgagat agaagacttt aagtgttgaa gaatgtatta ttttggactt aaaaactctg 4560
attacagagc aacttaaaat acccatcagc tcatctggat gtagagagta attagcagaa 4620
tttgtttttt gattcggtca gtttagcaaa cttttcccgt gstttaagta ttcmctatca 4680
ttycaawawt acgccrtstk tatttttcgg atatcctacc atagagcgty taarccgtta 4740
ttttttaaaa gaacmcmctg cgsttatgga ggcgtttttat cagcagaaaa aaacatytwa 4800
tagtaacaat acvctgtccg ntatagtccy tcatgtcaaa gaaaagccgw caactgatct 4860
aatatcatcc arcngcctct nccttttatt gcagatccat tgcccccctca ggstattgag 4920
agtattgatg agcctattgc cattattggt atgagtggtc gtttttccaga agcgcgtacg 4980
gnttaaagca atgtgggaga tttttatccga aggtaaaagt sytgtgcagg agattcctat 5040
```

FIG. 22M (cont'd)

```
agagcgcttt anattggcat gaatattatg aacacccatc ggatgatgtt ygaanaandb 5100
taatagtaaa tggagygcct gcattcctgg tattaaagaa ttcgatccac aattttttcga 5160
aatttctcca agagaggcaa aaaarctgga ccctcttcaa cggcwcttat cacaggaatc 5220
mtsgaatgca ttggwaaats ctgcttatgk wwwmywacrc wkwgmtmwtw aracratggg 5280
atayktkkat tggtrttgaw smaggktwtt atmmrrrymw gmtcaatkmr gwygacsgca 5340
cacwttwawc catmakrmta tttttrgcata ccmgtytgsc agtwytywtt arakyttaat 5400
ggscmwrssa tggcwrtwaa wrccgcwtgy tcctccgsyw tggyygcrmt tcaccamgct 5460
kscsysagtt tackwcarca agcaatkyga wrcgsckawk gwcscggcag cwwwyttrmw 5520
mwwyacrssk sawswtkaws tggscwtgay ssawgsgrgy mtgakmysac mwgawgsyat 5580
amygawakac ckarnrtcam csygccaaks gcryagtgmy tggakagsmw gytgwtgcar 5640
tcgtaytgma acrwmtccttk sgggktttcc aaaaggggtt mmaaat             5686
```

FIG. 229M (cont'd)

TO "TO" SEQ ID NO VO

SEQ ID NO:32

```
gngatgagat tgatgagaat acttaatttg gtcgaanagg ccattacntc tatgattctt  60
ggtgaattta taagccaatt aaccngtgat ttagtttgga atatgaaaga accgtttta  120
tttgactatc ngaatattaa tactttatcg aatatgatcg agaatgaact cgaagctgtt  180
gaggtatagt tatgtttagaa gttattaata gatactgcca tggatacgta ttcgtgccag  240
tggtattggc cntagaagaa aaagggtttt ttgacctttt tacaaggaat agatacctta  300
catttgaaaa aataaaaaca gaattaaaatg ctaatagtgg ccatcttcaa gtagccttac  360
gcatgttgca gtctgtttca tggatatcat gtgatgataa agggtatgta ctaacagatg  420
cagcggacga aagaaataaa atatctagtg atttttataga gcttttttaat ttctcctatga  480
gtcgctattt agaaaatatg gaaaggcatg gattaaaaaa atggatagat caatccggag  540
ataactgggg tatttcaaac cctgtattaa ccgatttttt ttaattattc  600
cctattact agaactgaag gaaaatggtt atttttgatgc gttaaaaaaat gkwaatagtc  660
taaataaaaa attattttta ggntgatatc gaacaatcgg nttcgcaawg aaattattac  720
actatttaa acaaaagaac tggctccaag aagaatraag agacgtttta cttcacaaaa  780
ntctggtcaa tttnaycact caacgaattt ttattaccgc aatccattgc ttcttataag  840
cccatgttta tctcgggata acggaattaa tgtttggtaa tgctaggagt attttaaaaa  900
agggattgca tggagaggag agccatgttg accgaacctt aaatgttatt ggtagtggtt  960
ttcaacatca aaagtacttc gctgatatcg aagcgttagt cattcagtta tttaatgata  1020
mtttktacga tsraywsccg aaatrkrtts crratatggg ttgtggtgat gggactctac  1080
taaaaaatat ttacaatatt atcaaggaaa aatctgcacg aggaaacgtg ttgaatcact  1140
atcccgtggt acttattggt attgattata atgaagccgc tttgcaggaa actaacaata  1200
cactggcagg tgttgataca agacactatg tttaaaaagg cgatattggt gatcctgaag  1260
gaatgataag tgatctatat gatttaggta ttaaagatcc tgagaatata ttgcatgtgc  1320
gttcatttct ggatcatgat cgtcccttata ttgcacccac agaggtgatg aatattgaag  1380
cacgttcaaa gatatttgat caggcgtgt atgttgattc agaaggtcaa gcaatatcgc  1440
ctgtggttat gatacaaagt ctggtggaac atttaaaacg ctggtcttgt gtaaagacga  1500
aacatggctt gcttatatta gaagtacatt ctcttaaccc tgaggttgtc aaccaatatt  1560
tggatgaaag tgaaagtttg catttttgatg cctatcatg tttttcctct caatatttag  1620
tatcggctga ggatttttcta atatgtgctg cagaagctgg tttatttct aaacctgatg  1680
```

FIG. 22N

```
tttctcaaaa ttatccaagg aacttacctt ttactcgaat taccctaaat tttttgaaa 1740
aaaagcctta tcaaattcgt cacccgaatg aaaatgattt gtctgcattg atggcattag 1800
aaaaaatttg tcgacctaat aatcaatgtt tatgcattga tgaccttcgc caacgcatag 1860
atgaataccc aaaaggtcaa tgtgttttag aattaaacaa taccattgtt gcagtgattt 1920
attcacaaaa gtgtattaat agagtgttag gcactgctgc aggtgtttgg carswswwtg 1980
scmdhggaat rtgbdwdcac datttvtaba thactbgttt atcaatdtaw trcccaaaat 2040
aaaaaaagaa tatgccatmc aattattaca gtttatcttc tatytatcat ggtgttcawa 2100
atgatgttga agatgttatk ggtattgatg aaagtgagt cagttgatgt tttatattcc 2160
tacaagcagg cagtttatg gaaagtgagt cagttgatgt tttatattcc aagagtagaa 2220
aaacatattg ctaagtatcc caatagatat tggagtaaat gctctggatg cagagcagga 2280
aatggggttg tttggtgcta agtggttact atctatttt caaagccaag gagtgatgaa 2340
aaaatcaggt gagtattatc aaaaagatca attngaggtt gatgttaaat attattccaa 2400
aatattatcg attatttgag tgcttgctac tcatatttng aaaaaagaaa gcttatttca 2460
attcaaaaaa atacnggtgc aaacacttc caatattgat gaatttgctc ttaacgatcc 2520
attggtntga gttgcttcg tnttaagcgt acgtttttcct ctcaatatgc tagccttatg 2580
ccgwttctac gattaatggc atcgtgcctt tctcggtatt tggaaatatt aacaggcaaa 2640
atacaggcgc atgacattat ttttccagaa nggagggatg aatttatttg aaggtatttt 2700
taaaggctat caactttcag actattttaa tcatattctc gcagagctga tttatgaaag 2760
ggctanacgc tctatccggt gggtaatatg aantaaaaca attcgtattt tagaaataag 2820
gagcaggtac ctggtgtgc caacagagtt tgtattngaa tagnagcttc mccgctnctc 2880
gaatggttat aagagtttta cntatactgg atatctncgt ccntcgttcc ttcgttatgg 2940
gagaaaagtn agattttycc gataaatatn ccctggtntg caatataagg tgttagatat 3000
ntgaaagnca atttagantg cacaagggtt ttacctgat agctttgata ttngtgtatg 3060
catctaatgt tnctcccacga tacgaaawta tatacagtat accctttccc aaagtgagtc 3120
acatgctaac gcaaaatggc nttgttaatg ttgaatgaan tttactcngg atgaanggat 3180
ttgttactgt ttaccggtgg tttgttagat ggcctttggt tatatgaaga ccctaccaat 3240
cgattggata atgtctgctt gttaaatgtt gatcagtggc gatctatatt atttaaatca 3300
ggctttnaaa aatgttaaag actttgtttt acctttgaa aaacttaata ttgagcaaag 3360
```

FIG. 22N (cont'd)

```
tcaaagtatt attgtctctg agtggattaa tgaagacctg tctagtaatg nttgaaaatg 3420
tggtgaaaaa taatcanttg tttnagaaat acaaaatcac tcntgatncc gattactngt 3480
ggagnaataa aattagntta caattnaaaa gacaantcmc wtcgttanca caatagtatt 3540
ggagaaaat atttttataa aattttagng gggataaaaa gaaaattatn ggatttttct 3600
ccntaaacgc cccttgatt ggagtttatg ggttggattc atattcgaac ctacnttgga 3660
anttaaagat cattactcgg kragcmttyt tcyataaaac trgaasmtac tttkktmtky 3720
mawkatkraa yrmtksckkm rsctmtytgw kwcmtccsay atsattcmag wtrascytsr 3780
wattrtcgmt arakwcccta ttacggaaga gataatgact ggaggtacgt caaggtaar 3840
aacagggcaa tcgaatsaka atgaacctat tgcgattatt ggtatgtcyt gtttatttcc 3900
aggtgaggtt acgacagttg atgagttctg ggaattatta atacaagaaa gacatgccrt 3960
tcaacctta cctaagggac gttggcaatg gccakaaggt gttgatccat cgggagcaca 4020
acttggcatt gatcaggggtg gatttctgga tggtattgat acctttgatg ccsacttctt 4080
tcgtatatcg agaaaagaag cggagttwat ggaccctcas caagaaaaac tacctggaat 4140
taarttggca ggtcatasag catgccggat ataaacccat cggyttttttc tggtcaaaga 4200
natyggyatc tatgtgtggggt gctttgtcac cggtaattta tatgggagtt atttaactaa 4260
aagtgaccaa angccctaaa aaccaaccgg naaggcctat ttkcatgacc argtartana 4320
ttgttgttcg tytttmcccc aataanaatt ttcctatttt ntattaattt tttaaargtg 4380
cccmscstcc tctwtctgat wccgngcttg ttcaaryagt tttaggttgc ctwtttgacc 4440
caancarttt tatgcgnatt caattcgggg nangngngtga atcaggcntc tggtgggntg 4500
gggaycaatt waatrtcccc tccsmrtgaw accggtttct tnattayywa gcaggtntgt 4560
tntcaaaatc nggaatgta aacctttnga tccaccgccc gttggttttn tncctgggna 4620
aaggggggcgc tnttcttttt ttnaatcntt ttctcanccc natttaaaa ngattgtttt 4680
ttngggggtt taaaggggggg agatnaaaat nggggcaan cattnnttac ggccctaacc 4740
tnng                                                           4744
```

SEQ ID NO:33

```
gangattcct nccnctnccc attgaaaaga ggatggattn gancatatgg gtgtgcctgc  60
aagaagataa gtcaatataa tgtaactcag aaaaatcaat tcccaaaatg aataccccnc 120
aatcwataca aaaaawattg awagatttt kggtkgacat tactaacttt ttsgaggcna 180
agacatcmat ccmrgcmgga tgcctggtga ctatggtgkt gattccatta ttaggtatga 240
gatttyttaa tcgaattaac cyccaccttt aawatagaag ctgatgcttt attactaaca 300
gaaggaacga ttmaccagta tatctcataa arkwcmttct tttattgttg ataaaaaaaa 360
ttacccaatg ttaccaaatt ttggattaga aaatgattct aataaagaaa ataaaggctg 420
ggtaaagcct tcttttattg aatttattaa attgaaatc aatcctgaat atatagaaag 480
cagtacaaaa aataaagatt acgcgattct tgaaaatcta ataaataatg gagttgggagt 540
ttggagagaa aataatcatc tatgtttttga gtttttttat gaaactcata caaatgaaac 600
aattaaaaaa atagtgtttt cacccgaaat acttttttat tctctagata aggtaaaacg 660
atactttcca agtagctgcc agcaaaaaaa cagtctatat caaacggaag ttgagaagtt 720
tccatataat cttattcaag gattagagt ggaaatgcca gtcaatattg aaatttttaaa 780
taaagcattt aatcattttgg ttaacacata ttcaattttc agaacaaaag caatgttgat 840
caataagcaa tggattcagg taatacatga tggttttatca gtaagatgcg aaganaatta 900
yatacgaagg attatctgca ggaaaaaagat tttacgcaac aactaatnag tatttcaaaa 960
agagcaagt aaaaaattat ttgatatcga taatctgcct ttattaaaaa tttattttat 1020
ccataatggt aagacttag cagctatttt tgttcatgcg catcatttt gtgccgatgg 1080
atttacattt tttctttttc agaaagaatt tcatgatact trtgaaagta ttatraacgg 1140
antggrrwat ccggaaacgk gttcsawaaa gtgatggctg aatatggcca ctttgcattg 1200
tgtgaatata atcccaaaaa caaggagctg acaaaaaact ggcttgataa aattcgagat 1260
aaaaattttt ctttaaaatt taaagataag aaagactatg tcggtcaact gtcaagtgga 1320
gaaaaaatta ttgagctaga agtttctgta aatatgctgg aaaaattaag attatttaat 1380
gatgcgaata ataccacact gacgcaattg ctatgttgtg ctgttgcaat tttactgtat 1440
cgcctctcga ggctaccagt tttgcatca actctgccct atggtcaat gccgtagaga 1500
tttgaaataa tgatgggtga tttgcatca actcttttaa gttattggaa taaaatagaa 1560
caaagcatt ttctctattc cnggatggta ccttttttaa gttattggaa aaanggaaaa 1620
aggcnttnaa ttntcccccc naggattttt taaangggt ttggatnntt tntcngggaa 1680
```

FIG. 220

```
ccctcaanaa aaaaaaaatt tntttccaaa aaaaaaaggg gccccttaaa ntccccatta 1740
agggaatttt ttaaattttt taatttcccg ggnaaaatta tttntttaaa ttccggaatt 1800
aaggccnaan tggaattaat tggnaaaatt tccantttgg gtttttaaaa aggggaaaaa 1860
ncccannaat ttgggtttcc ttaaaaanaa aaaaaagggg ggnggccccc cggtgggttc 1920
nttnntgggg gnaaaaattt aaaaatttaa tttn                            1954
```

FIG. 22O (cont'd)

SEQ ID NO:34

```
anccgaaaaa naccnaaagg gnngccggcc cntgtcctnc gagtgcatna taaaaaancc   60
agtnataagn nggnnacaat antcatgccc cgcgcccncc gnaagnaacc tnantgggtt  120
naaggcttca aggcatcgg  tttcggcggg cttttgctgt cacgttgtcc gcgacaggct  180
cacgtntaaa aaggaaataa atcatgggtc ataaaattat ggcgcgttgc gggcgcggcg  240
acgaatgttc tgtatgcgct gttttccgt  ggcgcgttgc tgtctggtga tctgccttct  300
aaatctggca cagccgaatt gcgcgagctt ggtttgctg  aaaccagaca cacagcaact  360
gaataccaga aagaaaatca ctttaccttt ctgacatcag aagggcagaa atttgccgtt  420
gaacacctgg tcaatacgcg tttggtgag  cagcaatatt gcgcttcgat gacgcttggc  480
gttgagattg atacctctgc tgcacaaaag gcaatcgacg agctgsrcym scrmaktygk  540
gmcmccgkmw cctwmrarst twttccscaaw rragkktywt tmawmaagsm cscygskrky  600
gswwwtggwr ctawccacgm arcssmwwty gaaamacccks rkcyggntkw csrawawmwa  660
cmrsmycasc cttggwawmm armrwsmtga syywgckcwg aamaakgtwa ccstccrgkgc  720
cgmtwwgkkc aawkttwmac cysrwrwrr  ymcmaamatt garrcsttgm ycgraaccsc  780
gmtgaaaaan ncgctghntg nnaatgtrvg gcgtntggat gtchcaaagc aaatggcasc  840
agacaangaa agcgatggat gaactnnngg cttccttatg tccgcccggc caktcatgat  900
ggaatgtttc ccccsggtgg tgttatctgg caccagtgcc gtcgatagnt antgcnaant  960
tngantaant tnattnatca tttngncggg ntcctttncc ggncgatccn gccttgttta 1020
cggggcggcg acctcgncgg gttttcgcta tttatgaaaa tttttccgtt taaggcgttt 1080
ccgttcttct tcgtcataac ttaatgtttt tatttaaaat acccctgaa  aagaaaggaa 1140
acgacaggtg ctgaaagcga gctttttggc ctctgtcgtt tcctttctct gtttttgtcc 1200
cgtggaatga acaatggaag tcaacaaaaa gcagagctta tcgatgataa gcggtcaaac 1260
atgagaattc gcggccgcat aatacgactc actatagggga tcatatttat ggtgttatta 1320
aagggagtgc catcaatcat ggtggcaaaa ccaatggcta tagtgtgcct aatccggata 1380
agcaacagcg tgtcattagt gaggctttgc agcgggctca aatagctcct catcaagtca 1440
gttatgtaga agcgcatggt gcgggaagcc gttaggcga  cccaatagaa attacggctc 1500
tcagcaaagc atttaacaat gttagtgcgc aatttaatgt gaaaagtgca gccaatcaat 1560
cgtgttttat tggctcggta aaatccaata taggaaactg tgaatctgca gcagggacnt 1620
gccagtatta gcaaagtatt aaatcccaata aaacatgggc aaatagtgcc gtccttgcat 1680
tcaaaagaac tgaatcccaa tattgatttt cctttgtggt            taaccaagaa 1740
```

FIG. 22P

TCTCT0 B6G4750

```
ctgcgcgatt ggcagagacc gctgattgat ggaaaaacag tgccgagagt tgcgggtgtc 1800
tttcatttg  gggcaggtgg ttccaatngc nttacgtggt gattgaagag tatattgcga 1860
agataccgac aaataaacacc agggaatcta taaaccatag gtctattatt ccattatcag 1920
cacgaactgc tgagcagttg cggcaaattg ccagtagatt gctggcattt attgaaaaga 1980
acaagcaaga cagcgtggtt acccccttaa tagatattgc ttatacattg caggtaggac 2040
gcgaagcaat ggatgaacgc ttggggttta ttgtgagttc aacccgatga attagtcgaa 2100
gaactacgaa gatatcttca aacacacgat gatatggaag agctttatcg aggtcaggtt 2160
aatcgatatg aagacacctt tcttactatg gcggctggat ggaagatctc tcttgaggct 2220
atcccaccca tttgggatta aaaaacgaaa aactggtctt aagtttaatg ccaattattt 2280
gggatttaaa aggggtcttt gtggatttaa wttkgggrkr agwtatassw tkkyttmcca 2340
aargrkgwtw ktccycsgcr matkarmkka ytacctrtcc yttyggcrgs matatttta  2400
rgwtkktamm swtyrnmccc tcwtwcctyt ttktgrcccc agggnccaaa tttatttng  2460
tttgnggga  atttngtttt aaaaaagaat tcggttaanc ccacctnccn ttaaactttc 2520
atttggggg  gnaatgggtt ttattggnaa cccattccna aaaccaaaaa ngggcctttt 2580
tttttccat  tccnaaaaaa accaaatttt ggcccctttt ttgggggggg gaaaaaaaa  2640
acccnaangg ggaaaaattn ttttaaaaa  aa                               2672
```

FIG. 22P (cont'd)

SEQ ID NO:35

```
nnnannttc cnattccctt gggcggaaat ttttgccca gggnccgnat aaccaaagga  60
cccttttcn ggcccctaa aaaaacccaa tttncccct ttaatcccc cgaataaaag  120
aacctttccc aaaaaaggg naanttgaan tgggggnan cntgggaaat cccaagccaa  180
aaaaaggccc aaymtcgccc waraacrkkc cawwaatsss gawaasmcyy ccagawarwa  240
ttkwtkrrwa mwrawcyagy wwmscamatc rgrtgttwta tggrrsssrg wmyawwtraa  300
aarymytcca wyktkttkss grrtcaatka tgssrkwtyy tcaaymttgg gactcmcyym  360
tcmmmwwttt gaaaaccmyw attatakktr taagsgggcc aaataatcaa tgttggatat  420
ggttaamccg ataaaaaaa gcctcaataa atttnctgc caacaactaa gacagctcta  480
caataaacat aaaagcaata atgagtccct gtgattattt cccatgaaaa aaacaatggc  540
atttaatag atagatctca tactgaatcg aatattgcca ttataggtat atcagggtgt  600
tttccggatg caaaaaatgt taatgaattt tgggaaaatt taaaaaatgc tcgtcatagt  660
gttaaagaaa ttccctataa ccggtcttgg gatattgata attactttga tacttcttcg  720
caaacacatg cacaggaata tgttaaacaa ggagcatttt tagaaaatat cgatcttttt  780
gatccgctgt tttttaatat ttctccggtg gaagcagagc ttatggatcc aactgaacga  840
tttttccttc aggaatcctg gaaagcgatt gananatgc tggttatgat gcatcaaact  900
ntaagtggaa aacgntntgg ggggtatttg cctgtgcaaa gggagactac catgccatta  960
ttcacaagca ggataaaact cgtatcatga ccactgactc tatgcctcct gccaggtttg  1020
cttatttatt gaatttgnnt tagggcctgc agttcacgtt gatancnggc ttgttcatcn  1080
gtctttggca gcaattgctt acgcatgtga tagcctcatt cttagaaatt gtgatgttgc  1140
cattgcagga ggtggaaata tcaactcaac gccgatgtta tcccagcctt ttgatcagtt  1200
tggtttgttg tcaaaagatg gcggtascat tgcctttttt tgccttsdat caacgtgcaa  1260
attaggggag gcggtascat cgattatttt aaaacccta caacaagcga ttgacgatgg  1320
tgatcaggtc tacggattaa ttaagggttg gggaatgaat caaratggaa aaaccaatgg  1380
tmttactgct cctagtgtta agtcacaaat tcakttggaa acggatgttt atcaaaaatt  1440
tatgatwaat cctgaacata ttackatggt tsmagcccat ggaactggga ctaaactasg  1500
agatcccatt gaggytcagg cattamcaga agcttttcas aaatatacty aaaaaacakg  1560
gtmttgtgca ctagngttct ttraaaarwa aatattggac atacnttttt ccgctgctg  1620
graktckcta gatgttaatm aaggtttttg ttgtccattt cwcancatty acmargwttc  1680
```

FIG. 22Q

```
yytycrtart twwtaattyw maarstatna mttwttcaww attcctatyg tnaawwaccc 1740
ywattttkkw ktaaaamcag cycatwwttw wyysskgtm attwnyycc nctttwttrw 1800
wmcccmmytt gcgrrcsgtt ttttcgtkk ktgtttcrwc akagaatctm mmsycctttt 1860
ytygcmmmma anmrnnttaa acmmmtwrcc tttytttrgr kggsgyccccc cncccngggg 1920
gaanccccca antgggtccc cnnttttggg gggggggntt tngnnaangn aaaatttttt 1980
tttcatgccc nnanaaaagg tccttccgca accttttta aaaaataaanc ccntccccna 2040
aaaanttggg natttgggan tgggaattaa aaaggccccct ttttaccccc cccgngttta 2100
atttaattc cccccttttt tggttccggg cc                            2132
```

FIG. 22Q(cont'd)

SEQ ID NO:36

```
nnaccaattt  tccgaaaccc  aagncatttt  gaaaggggtt  tttggggccc  ggggttgaaa   60
aaaaaaangg  ggtttttgg   ccccccccc   nnagnaanta  aaaatgggta  aggaacncgc  120
ccccccactt  tggaaaacct  tcccnaaaa   aaaataaaaa  ggcntttgga  atttttaac   180
naaaatnncg  ggggntgggc  cntttaaana  accccccnt   ttncaaaaaa  tgcgarrggk  240
gggyctccwr  rnaytyyaaw  awgramgsgk  tawytmccwa  ktgrggggwn  ttwtatcawt  300
aaaggnsssg  ggktytawkw  tttawraarr  ggragcttta  graawawaaw  arwcmgtkgk  360
ktttaaraga  rattkwwaar  rraactggrw  traaktwwww  rwrttatwat  anaaatrkkw  420
aakggwwrta  tagagggaaa  aaaatttaaa  ggataaatga  argaaaccca  tcwccattta  480
ttttccaaga  sgaccaaaga  aatgatagaa  gttgttaaat  ttatggrtgc  gtaaaaagaa  540
atttttcccaa awttttaawt  yctttggggt  aaaggattaa  acmcttgrtt  ggaagcaatt  600
atatggtaaa  gaacmtccag  ctcgtattag  tttgccawgc  tatccttttg  ccaaagagcg  660
gttattggtt  ggatactgat  aagttagtcg  acggtagtta  tytcaaccct  agrcaagagg  720
gaatwaatac  agatagtgat  aagtttgatg  aaaagctttta tgaatccttg  ttgacaatc   780
ttttttccaa  aactatgacm  cctgatgaag  ctattaagtt  aatggaagag  gaggtatcat  840
gaaaaaatta  attaaaattga  tttatgaaaa  agtttttgaa  aataaactat  caaaatcaga  900
agccttgtcg  ttgattagtg  gattgaaggc  gagcaatact  actatccttc  atcccctat   960
acatgaaaac  acgtcaagtt  tttttgaaaa  aaaattcagt  tcaactttttt ctggtagaga 1020
atttttcttt  cggatagatg  ctaaccttaa  aaaaagtgta  ttatctcctg  taacatacct 1080
tgaaatggtt  tatgctgcag  caacaaaggc  aatggctggt  gagaaatttt  cagcgcaatn 1140
ttaaaaaaat  tgagtggcaa  tatccagcta  ttgttcatga  agagtcgata  acagttcata 1200
ttcgtttttt  taaagatcca  aatacctggt  tggatacaag  tgaggagaaa  ttttatgct  1260
atcaaattta  cacaatttca  aataatcaag  aaacananagc gatattgttc  acaacgggg  1320
tgtaatagat  tatgatcata  aaaatagtga  attaagtcca  cttgatattt  tttcactaca 1380
aaagcatatc  agtgaatatt  ttctagaccc  taaagaggat  agtgatttt   ttgaaaagag 1440
cgataaaagt  aatgagccct  attatcagag  tattgaattg  ttacatatta  atttcagaa  1500
agaagcgctt  ataaaaattat cgtttgatca  cgtatcagga  tacataaac   catcaagagt 1560
cattgttttt  acatccagat  atactggagt  tggctttaca  atcctgtagc  ttcttatgcc 1620
ttgatatggc  agatactgga  atctgagttt  ttcggggggag ttgcagccca  gtgagtggta 1680
gatgcttta   tcaaatncat  gtctcggctg  gtccagggac  ctcaaatggt  gggktttggg 1740
```

FIG. 22R

```
ttaccggctt aacarsyttc catggaaggg tagggnttaw atagscrcan tattggccy 1800
tkggtgrtgg aatrawrgtw atkcskgggg wccwgstamw wagggttggg ttytcaaaac 1860
cawawraamm skgtttyttg rrkwwttttt tssmmmmgcc scnaaattng aacccccnn 1920
ngngtaaaanc cccnngaaat tnntnttttt ttttncccc gnnccccaan cnnagaaang 1980
aacctttncg nggttttggg caattaaatt taattagggc aaacccccccn ttaatnggaa 2040
gggggnccca nttgggnggt tttttttngga aaaaggaagg gnaaattggg gnnaaaaagg 2100
cccccccaaa nttnggtttt aaaaagggga aaaaaaaatn aaccgtttaa aaaaattnnc 2160
ccccaaant                                                       2169
```

FIG. 22R.(cont'd)

SEQ ID NO:37

```
gcaccgttgg  aacgttatgg  catcgattca  ttgattgtga  ttcaggtgaa  tcaggcgttg   60
gcggctattt  ttgatgcgct  gcctaaaaca  ctgttatttg  aatatcaaac  gatagacgcg  120
gtcgtggctt  acttggttga  gcagcaccgc  caggcatgta  gggtgtggac  gggttaacg   180
gcaacgggtc  aagctcaaag  agaggtgtc   atctcctcta  cctcatcagc  gggtgttgaa  240
cctgtgacac  cgagacagaa  agaggggtca  cctatacaga  aagacatcaa  gtgccgagaa  300
cacccagtga  cagacgagcc  tatagccatt  attggtctga  gtggacatta  tccgcaagcg  360
aatagtttgg  atgcgtattg  ggaaaacttg  aaggcaggaa  aagattgtat  tcgtgaaatt  420
cccgatgacc  gttggtcgct  agacggtttt  ttccatgaag  atgttgaaga  agcgattgcg  480
caagggaaaa  gttacagtaa  atggggcggt  tttttagagg  gatttgctga  tttttgaccct  540
ctcttttta   acctatcgcc  gcgagagtg   atgacgatcg  atccacagga  gcgttgtttt  600
ttacagagtg  cgtggggaagc  tgtggaggat  gtattaccaa  gccggttatc  cttgcttcgc  660
agtttaacaa  gcgtgtgggt  gtattgcgg   gtattaccaa  gacgggtttt  gattttatg   720
gaatacaatc  ggatcsagct  sbtytnycgc  wtnatacttc  ctnttackcc  aggtttaaaa  780
rgccwmgwtc  agctntkttt  tsgggtttt   taabthhgcg  ggkgggtktt  ttkvsccvwa  840
tnagcancsg  dcggttttk   matttttttta  wtggraanac  nncaatcggg  atcaacntct  900
ttntccgctt  atacttcctt  tagctcagtg  gnnctnaatc  gtgtgtcttt  atttttgg   960
tttacaaggc  ccaagtcntg  tnctattgat  accatgtgct  cctcatcttt  gacggcaata 1020
catgaagcct  gcgagcatct  gcatcgccaa  cgatgtgaac  tggctattgc  gggggagtg 1080
aatctttatt  tgncacccctt  caacctatat  tagattgtgt  actttacgga  tgctttccaa 1140
agagggcctg  tgcaaaagct  ttggttatgg  tggttaatggg  tttgtaccgg  gagnaggggg 1200
ttggcgctgt  gttgttgaaa  ccccttgnntc  tagagccatt  caggatcagg  atagtatata 1260
tgccattatt  agagggagtt  gtgttaatca  tggtggcaaa  accaatggtt  atactgtgcc 1320
taatccacat  tctcanaggc  gatcttantt  cgtgaagctt  tggantaaag  ctcangngtt 1380
aantgcccgt  atnggtcagt  tatatagaag  ccncatggta  canggtacag  agttggggtga 1440
ccncaataga  ggtaagaggc  ttaacgcaag  ccttntcaac  aagatactga  tgatgttggt 1500
ttttgtgtat  ntggngttca  gttaaatcta  natattggtc  atcntggaag  ctgccgctgg 1560
tatcgctggg  ctgagcanaa  gttattctgc  agatgaagta  tgaaaaaata  gtggcaagcc 1620
tacatgcaga  aagactgaat  gccaatataa  atttgaaca   aactcctttt  gttgttcagc 1680
aatcacttaa  tgaatgggaa  agaccaaacc  ttcatgttaa  aagaaaatc   tggaaaaatc 1740
```

FIG. 22S

```
ctaggaccgc ggggatctct tctttttggtg cgggagggac gaatgcacat ataataatac 1800
aggagtatat tccagaagtc agtcagacac gacaatcaga ggtcaggaat aaaccagctc 1860
accggtggc  cattctgcta tctgcgcata cttccgctca gtactgaag  atggccgagg 1920
cactttact  atttattcgt accatagtga ataatatgga ctcatcctat tcggcagggg 1980
atgagatgac tcacttggta aatgtagcct atacattaca ggttggacgt gaagctatgc 2040
aggaacgcct ggggtttgtt gtgaattccc tgagtgatat tgaagtgaaa ctacaaaaat 2100
ttattgataa ggaaaatgat attgaagact tttatcggga tcaaatcaag actaaaaaag 2160
aaatctcagc tctatttaat tcggatgaag tcaaatcaag agtgattaaa caatggatgc 2220
gacaaaaaaa actatccagg ctttgtcac  atttgcagga gggagttcac tgtgattgga 2280
acttcttgta tcaacacatg cgaaccaaac cttatcggtt acattacca  acgtacccat 2340
ttgcttataa tcgatattgg attgatgata ataataaaaa tcaatcgact gtagttgaaa 2400
aaaccaacac tattattaaa gagagaaaag agcaagttag attagagccg cttgatttta 2460
tggaaaggaa aaaacttaat gtccatgaaa aaaagccatt tcattgttct ttatcaactc 2520
aatcagaggc ctggtccggg gcgaacactc agacatccag tgtaaacaa  agacgatctt 2580
atgtacaggt gcttaaacaa gacgatatat taagggatct taaatcagcg ctgcctacag 2640
ctgttgaagg tatgatacca acattaaatc gaactggtgt catgacagaa agcttaagct 2700
cctactcaga agcatttgca aactatgctg gtatgtgtgg tggagaagta ttggacttgg 2760
ggtgtgccta tggaattgca acgattgcag cgttggagcg agggggctcaa gtattagccg 2820
tagatatgga ggcacagcat ctggaaatat tatcagaccg tattcgggat gaagtgaagt 2880
cgcgtttatc gacacaagta ggcaagttgc tggatcttca tttgatcaa  gaacgtttg  2940
ctgcgatcca tgcgagccga gtgctacact ttttaaaccc acaggatttc cagcaagcat 3000
tacaaaaaat gtatggctgg ttaaaacccg gaggaaaatt atttattgtg acggataccc 3060
cttatatggg ttattgggcg agcaaagcag gggtttatga aactcgtaaa gcagcagggg 3120
atttatggcc agctacata  gataatgttg gttctcactt taatactaaa gagatagaag 3180
gggcccaac  tctgatcaac ccgatggacc cggaaatact gcatcgtgaa tgcaaaaaat 3240
ttggtttca  tgtagagag  actgttttt  ttgcaggaga attgaagccg ctaaataata 3300
gtttagaaaa atcaggtaga gagcatgtgt gtataatagc attgaagccg gaattggaag 3360
attccgacag gcttgagaaa tcgctattgc cagtacggaa aactgaaacg gagaataagg 3420
aaattagcct actgcaaata cagacaatgc tcttgaattt            gaattggata 3480
```

FIG. 22S (cont'd)

```
tagagagccgg tatgttggat gagttaaaac cttttacaga ttaggggttg gactcgataa 3540
atggagtcac  ctggatacga aaaatcaata gtcactatgg attatctatg actgcgacga 3600
aagtatatga  ttaccaaat  attattgagt tggcagagtt tttaagaaaa caaattattt 3660
cgaatgatga  aaagcagcat caaccatcta tatcaacaat atttcccact tcattggatg 3720
aattattgaa  aaaaatacaa gaaggtactt tagggattga agaagccgac caattaattg 3780
atgaaactacc tgattaccat ctagatatgg aaaccatttt gttgttataa gggaaagcga 3840
ggtatttttg  tgtcacaccg atggatggta aaaccatttt ggctgaaaag aatttagctc 3900
aaatcggcgc  agctttgctg cgtccgagtg atttgacttg ttatggtgaa ctcaactatg 3960
cttgtacggc  atttccttac ataagtaggt gaaaaatgga aacaattagt gtaaaccaat 4020
ttagagacaa  tttgaaaagt tttgtagaac aagcagttag ccaattaaag gagcaagaac 4080
taacgcgcag  agccagtgag gcttcgtcg  tgataagtgc cacgcatgag gattcgcttg 4140
aggaaaagcct ttatattttt cagaatagtg atttgatgca acaaattgca gaaatcactg 4200
gtacgcatac  tcagggcaag ggatacaaac caacggataa tgagttgaat taagcggtta 4260
gtgcttgaag  gccatacctg ggaaaactgg gaaaagcttt gcgagcaaga aacctccgga 4320
cacaaggcgt  tatgcaaact actcaaagaa atgcttcact cggaagatct gcgcatttcg 4380
ttaggtaaac  ctgagccgct taagcataac ttatctggct ttcgctatcg cgatcaacat 4440
caaaaagacc  gactgatata tcgctttatt ttcgctatcg gtggtcacta cgatcaacat 4500
ttagttgcca  taacgccata acaagggaaa atatgaagcg cagcggaatc tttcccttg  4560
tggttacgct  tgttataagg ttgtttattc atttagactc cctctgtgtt tactgcaytg 4620
tgtggtagcc  agtccagtcc acgttttttg kgggcsrwtt tcaatgtgct tgttatacac 4680
ttagatgtcc  gaaaakgraa mccamccmcc attgtatatt tyttttaact caatggataa 4740
atgttttata  gctaactgtg aagcttcgat tgcctgattg aactcacgat catttttctc 4800
tgatttttca  taaaaggcgt taggtgaaaa tctgattttt gcttgctttg tatgtacagc 4860
tttattcctg  aatctaatta aaacttttcat atattgatat gctttgctttg atttatcaat 4920
ttcttttcca  gtaataattc gtgtgcaaac tagccattta gaaataaatat ctaatttatc 4980
taagtgctca  acaaccgtat ttgtcagaca aaatgacgag cagaaaaatc wtagactgta 5040
tattcttaaa  tacwtagagg acaattwtcm cacaaaagat wtcttgcctc cactgaggct 5100
atttctttyt  tgkaatcttt atccctaata tttcccagc  ttagtgacca ataatttata 5160
tcatwmaggt  actctgtaag ccgataatac ctttgctta  tatcccaata attgggacca 5220
```

FIG. 22S (cont'd)

```
aaaaaagtgc  aaaagcgtgg  gcgcagatcg  agaaatttat  tccgttgygg  aatagactat  5280
ttgcatcaat  tactgctcaa  wgccgctgaa  aatttctgca  aattggtaag  ggctttacgt  5340
gttttgtctt  gtacawagct  gttctattca  gcaggagaca  aacatggatt  agcaagtatg  5400
ggtgtagtta  tcactkaaag  aaatcattgg  cagtatagtc  aactcattga  aagtcctata  5460
ttaacgtcgc  cgaaagttaa  atagtttta   cgatgagatg  taggcattgt  gataaatgtg  5520
ctgcacatca  tcacaatcat  tcagcatatc  cataaacctc  tcgaacatct  taacatcatc  5580
tccgtcact   ggagttgttg  tttgaggaat  aaattggatt  tcgtcgacat  crractgaag  5640
cttttcaaag  gcttcagata  acgcttgctt  ggccttaaaa  tattcagtat  gaggaaccag  5700
tacgctgatc  ttaccgtttt  ttgcttcaat  atcggtgaca  tccacatttt  ccatcattaa  5760
tgtctccaat  acgacttctt  cgtcatttcc  agtgaaaaca  aggattgcac  aatgattaaa  5820
catatggcta  acactgcctt  gggtaccaat  cttgcttttg  gttttggtaa  aacaaatacg  5880
cacatcaccg  aaggtgcgat  tggggttatc  cgttaaacaa  tcaakaaawam ccatamagtt  5940
cccnaggtcc  caaaaccttc  ataacggagt  gscaawaaag  tyttcccmcc  mcgcsccccc  6000
tttagctttg  tytagggcct  tttgaaataa  cgtgggcttg  gaancttggt  ttttttttgc  6060
tttatctatc  catactgcgt  agagcaagat  taccttctgg  atcactcccc  ccntgatttt  6120
gcacagacat  aaattgcgcg  accatatttg  ctgtagactt  tggctttggc  atcggaggtt  6180
ttagccattg  attctttgcg  gttctgatag  gctcgaccca  ttatataacc  cctgattttt  6240
attgaacgaa  gagtggattt  tacaggtaac  tatgagtatg  gggaacctgc  taatagtmmw  6300
ckwttgtccm  wtatymarra  ttgcyggtgg  ttgtygcttc  tgamtaaagc  ctcaatattt  6360
gatagattca  ctgaatcatt  atcattaatg  ggtttgataa  gtatttataa  gaggtttgcg  6420
gtatgatgca  gtttgtaatt  acctcctccc  ccataataat  aatgtactgt  aaggaaactc  6480
aatgtcttac  gattatgatt  tgtttgtgat  tggtgccggt  tctggtggtg  tgcgtgcgag  6540
tcgtattgca  gcaggccttg  gcgctaaagt  cgcggtagct  gaggatctct  ttcttggtgg  6600
tacttgtgtt  aatgttggtt  gtgtaccaaa  aaagcttttg  gttctatggg  tcacmttttt  6660
ytgaagagtt  traascagcc  gcaggttttg  gttggacaat  agggtcatcg  tcttttcatt  6720
ggccamcatt  acgtgacaat  aaracaaaag  aaatcgagcg  tcttaatggc  ggtttatcaa  6780
aacctcttag  aaaagtgcgg  gagtcgatat  tattaatggg  cggggcgacc  attattgatc  6840
ctcatacgat  agcagttggg  gacagacagt  tttactgctg  aacgtatttt  agttgctggc  6900
ctgccattcc  tgatattcca  gggagagaac  atattatcag  ttnctaacga  agtgkkttwt  6960
```

FIG. 22S (cont'd)

```
ckgraagmsk wwmckaaaws srwwgctgtc gtagggggtg gctatattgc tgttgagttt 7020
gcaggtattt ttcaagggtt gggtagtgac attcatttat tgtatcgagg tgatttattt 7080
ctaaggggat ttgatcgaga tgttcgtgaa tttactgcca gtgagatgat aaagaaagga 7140
gtaaatttac atttaaatcg cagtgtttct gctattgaaa agcaagtgga tggtagccta 7200
ttagtgggat taactgatgg ctcaaccttg gaagtggata ctattatgta tgccacaggt 7260
ygaaaaccar rmmyygaggs wyytggktyt ksawwrkrsc gctgtmaaas krrckyaaaw 7320
gggagccctt tycaagtnta actgakaayt tttcaaanca agcagaagcc wbtytawttt 7380
aygcaagtwa gggawtgtt  aatagaccgg tatgncaatk aacvccaagt tgstctsggc 7440
tgaarggtat ggmcttaagc mcagctttta tattagtgac tmcagtggat taataanggt 7500
agattatggg tttsgttgc  cmagaaccgg ttttnttgc  caamcccaan tatgggcacc 7560
gtaggttata gtgaagagcg ggccaagrgm wragtttgat acggtgbctg tttadaaatr 7620
gatttttaaa ccagatgaag ncatacgctg agtgncttct tngatngagc ggactttttg 7680
tgaagtnwat tagtagancc aaaacnmcag ataragtcat aggttgtcat atggtaggcg 7740
ctcracgcgg gagaaatctt gntattgcca taaaggcagg agccaccaaa gcagactttg 7800
atagcaccat aggtattcac cctacggttg ccgaagagtt tgtgactatg agagagcctg 7860
cgtatatatt atagcaatag gccaagggca gctacttgtt ttagtaaggc tatttttaca 7920
aatagtacca tcagataata taktgcggta gtttacgttc yamtgaatca kcagtkgtma 7980
wakkagtcat atagcaygms gwrtkatasg kgkattcata yyrtrcawaa syaaykckgt 8040
cgtcgaggga yataatkctc akrataatat wcrttcgasw cctgtysakk cccwaccacr 8100
satacywssc aaagaarttgy agtratcrag ckwtgsakws tgamcgntgs matnakgttc 8160
aacgcatgkc ccagcctkat agcatcygac caytsagggc caawrkgmgt taayccagt  8220
gtwcngttns atrnrsgacs mgktaatggt mggtgwttst wrkawgccsg mtcttmmaaa 8280
mcmsanngmr acgtacaagm rtgwcaccmg krkgcytrya snmattmgct atcamrcnca 8340
yssrrgggkk ggycttmawa arargggcaa aaaaaaaan                        8380
```

FIG. 22S (cont'd)

Lys Leu Gly Asp Pro Ile Glu Val Glu Thr Leu Ala Glu Ser Phe Arg SEQ ID NO:11
1   5   10   15

Val Tyr Thr Asp Lys Arg His Tyr Cys Ala Leu Gly Ser Val Lys Ser
                    20   25   30

Asn Ile Gly His Leu Gly Val Gly Ala Gly Ile Ala Gly Val Thr Lys
                    35   40   45

Val Leu Leu Ser Leu Gln His Arg Met Leu Pro Pro Thr Ile His Cys
            50   55   60

Glu Asp Val Asn Pro Gln Ile Ala Leu Glu Gly Ser Pro Phe Tyr Ile
            65   70   75   80

Asn Thr Glu Leu Lys Pro Trp Gln Ser Gly Asp Gly Ile Pro Arg Arg
                    85   90   95

Ala Gly Val Ser Ser Phe Gly Val Ser
                    100   105

FIG. 22T

SEQ ID NO:12

Lys Leu Gly Asp Pro Ile Glu Val Glu Thr Leu Ala Glu Ser Phe Arg
1   5   10   15

Val Tyr Thr Asp Lys Arg His Tyr Cys Ala Leu Gly Ser Val Lys Ser
            20   25   30

Asn Ile Gly His Leu Gly Val Gly Ala Gly Ile Ala Gly Val Thr Lys
        35   40   45

Val Leu Leu Ser Leu Gln His Arg Met Leu Pro Pro Thr Ile His Cys
    50   55   60

Glu Asp Val Asn Pro Gln Ile Ala Leu Glu Gly Ser Pro Phe Tyr Ile
65   70   75   80

Asn Thr Glu Leu Lys Pro Trp Gln Ser Gly Asp Gly Ile Pro Arg Arg
                85   90   95

Ala Gly Val Ser Ser Phe Gly Val Ser Gly Thr Asn Ala His Leu Val
                100   105   110

Leu Glu Glu Tyr Thr His Arg Val Thr Ser Pro Leu Gln Asn Thr Ile
            115   120   125

Leu Pro Gln Asn Gly Leu Phe Ile Val Pro Leu Ser Ala Lys Asn Asp
        130   135   140

FIG. 22U

Glu Cys Leu Asn Ala Cys Val Glu Arg Leu Leu Phe Phe Leu Lys Ser
145   150   155   160

Arg Gln Ser Asp Thr Tyr Lys Lys Tyr Ser Leu Ser Asp Thr Ala Pro
                165   170   175

Ile Leu Leu Asp Leu Ala Tyr Thr Leu Gln Val Ser Arg Glu Ala Met
                180   185   190

Thr Lys Arg Val Ala Phe Val Val Lys Thr Thr Ile Glu Leu Met Glu
                195   200   205

Lys Leu Asn Ala Phe Ile Glu Lys Gln Asn Thr Ile Lys Ala Ser Asn
                210   215   220

Ile Lys Gly Cys Tyr Tyr Ser Ser Thr Lys Thr Ser Ser Pro Phe Asp
225   230   235   240

Asn Glu Ser Thr Asp
                245

FIG. 22U (cont'd)

SEQ ID NO:14

Arg Leu Gly Asp Pro Ile Glu Leu Ala Ala Leu Ser Lys Ala Phe Glu
1   5   10   15

Glu Gly Thr Gln Arg Lys Gln Phe Cys Gly Ile Gly Ser Val Lys Ser
            20   25   30

Asn Ile Gly His Leu Asp Val Ala Ala Gly Val Val Gly Leu Ile Lys
        35   40   45

Thr Ala Leu Ser Leu Gln His Arg Leu Leu Pro Pro Thr Ile Asn Tyr
    50   55   60

Glu Ala Pro Asn Arg Glu Ile Asn Phe Glu Gln Ser Pro Phe His Val
65   70   75   80

Ile Asp Glu Leu Thr Glu Trp Arg Gly Gln Gly Gly Pro Leu Arg Ala
            85   90   95

Gly Val Ser Ser Phe Gly Ile Gly
            100

FIG. 22V

SEQ ID NO:16

```
Gln Leu Gly Asp Pro Ile Glu Leu Gln Ala Leu Ala Asp Val Tyr Arg
 1               5                   10                  15

Val Asp Asn Trp Arg Lys Asn Thr Cys Ala Leu Gly Ser Val Lys Ser
                20                  25                  30

Asn Ile Gly His Thr Ser Ala Ala Ser Gly Val Ala Gly Ile His Lys
                35                  40                  45

Val Leu Leu Ser Leu Lys His Arg Gln Leu Val Ala Ser Leu His Phe
            50                  55                  60

Asn Ser Ala Asn His His Phe Asp Phe Gln Gln Ser Pro Phe Tyr Val
65                  70                  75                  80

Asn Thr Gln Leu Arg Pro Trp Asp Gln Ala Glu Gly Leu Glu Glu Ser
                85                  90                  95

Arg Arg Ala Ala Val Ser Ser Phe Gly Val Ser
            100                 105
```

FIG. 22W

SEQ ID NO:18

```
Glu Tyr Gly Asp Pro Met Glu Leu Thr Ala Ala Ala Val Phe Gly
1               5                  10                  15

Arg Gly Arg Asn Gln Lys Asn Arg Leu Val Gly Ser Val Lys Ala
            20                  25                  30

Asn Ile Ser His Leu Glu Ala Ala Gly Gly Ile Ser Gly Leu Ile Lys
            35                  40                  45

Ala Val Leu Ala Met Gln His Gly Val Ile Pro Gln Gln Leu His Cys
        50                  55                  60

Lys Glu Pro Ser Pro His Ile Pro Trp Lys Arg Leu Pro Leu Asp Leu
65                  70                  75                  80

Val Gln Glu Gln Thr Val Trp Pro Glu Ser Glu Glu Arg Ile Ala Ala
                85                  90                  95

Val Thr Ala Ser Asp
            100
```

FIG. 22X

SEQ ID NO:20

```
Gln Leu Gly Asp Glu Ile Glu Val Arg Ala Leu Ser Lys Val Tyr Gly
1               5                   10                  15
Asp Ser Gln Ser Thr Thr Tyr Leu Gly Ala Val Lys Ser Asn Ile Gly
                20                  25                  30
His Ala Asn Ala Gly Ala Gly Ile Ala Gly Phe Ile Lys Thr Val Leu
                35                  40                  45
Ser Leu Tyr His Gly Lys Ile Ala Pro Asn Ala Gly Asn Thr Glu Pro
                50                  55                  60
Asn Ala Ala Leu Asn Leu Asp Ala Phe His Phe Ala Leu Pro Lys Thr
                65                  70                  75                  80
Leu Leu Thr Trp Pro Glu Cys Asp Val Arg Arg Ala Ala Ile Ser Ser
                85                  90                  95
Leu Gly Phe Gly
                100
```

FIG. 22Y

Ala Leu Gly Asp Pro Ile Glu Phe Gly Ala Ile Lys Ala Val Tyr Gly SEQ ID NO:22
1   5   10   15

Pro Gly Arg Ser Ser Pro Leu Val Leu Gly Ala Leu Lys Ser Asn Ile
        20   25   30

Gly His Leu Glu Ala Thr Ala Gly Val Ala Ala Leu Ile Lys Ala Val
    35   40   45

Leu Val Leu Gln His Gly Val Ala Pro Ala Asn Leu His Cys His Lys
    50   55   60

Leu Asn Pro Leu Leu Asp Ile Asp Gly Phe Asn Val Val Phe Pro Gln
        65   70   75   80

Ser Glu Thr Pro Leu His Ser Ser Leu Gln Leu Leu Gly Gly Tyr Gln
            85   90   95

Phe Val Arg Val Trp
        100

FIG. 22Z

Thr Trp Xaa Ser Leu Leu Arg Trp Gly Leu Leu Gln Asn His Phe Asp   *SEQ ID NO:24*
1   5   10   15

Pro Tyr Thr Glu Lys Lys Asn Tyr Cys Ala Ser Gly Ser Val Lys Ser
            20   25   30

Asn Ile Gly His Leu Thr Ala Ala Gly Val Ser Gly Val Val Lys Val
35   40   45

Leu Leu Ala Leu Lys His Lys Gln Leu Pro Pro Ser Cys His Leu Val
50   55   60

Lys Ile Asn Glu His Ile Asn Leu Glu Asp Ser Pro Phe Tyr Ile Asn
65   70   75   80

Thr Ala Leu Lys Lys Trp Glu Val Ser Glu Gly Glu Ala Arg Arg Ala
                    85   90   95

Ala Val Ser Ser Phe Gly Ser
                100

FIG. 22AA

SEQ ID NO:24

```
Pro Leu Gly Asp Pro Ile Glu Met Ala Ala Leu Lys Gln Ala Phe Gly
 1               5                  10                  15
Thr Gln Lys Lys Tyr Cys Ala Ile Gly Ser Val Lys Ser Asn Ile
                20                  25                  30
Gly His Ala Asp Thr Ala Ala Gly Val Ala Gly Leu Ile Lys Thr Val
                35                  40                  45
Met Ala Leu Lys Ala Arg Gln Ile Pro Pro Ser Leu His Phe Glu Thr
                50                  55                  60
Pro Asn Pro Gln Ile Asp Phe Ala Asp Ser Pro Phe Tyr Val Asn Thr
                65                  70                  75          80
Thr Leu Lys Asp Trp Asn Thr Asn Gly Val Pro Arg Arg Ala Gly Val
                85                  90                  95
Ser Ser Phe Gly Ile Gly
               100
```

FIG. 22BB

SEQ ID NO:28

```
Val Val Gly Asp Pro Ile Glu Val Val Gly Leu Thr Lys Ala Tyr Gln
1               5                   10                  15

Ala His Thr Gln Glu Arg Gln Tyr Cys Gly Leu Gly Ser Val Lys Thr
            20                  25                  30

Asn Ile Gly His Thr Asp Ser Ala Ala Gly Ile Ala Gly Leu Leu Lys
        35                  40                  45

Ile Val Met Ala Met Lys His Arg Gln Leu Pro Pro Ser Leu Asn Phe
    50                  55                  60

Glu Thr Pro Asn Pro Asp Leu Asp Leu Glu Asn Ser Pro Phe Phe Ile
65                  70                  75                  80

Gln Thr Lys Leu Lys Asp Trp Glu Ser Val Gly Pro Arg Arg Ala Ala
                85                  90                  95

Leu Ser Ser Phe Gly Leu Gly
                100
```

FIG. 22CC

POLYPEPTIDE SEQUENCE

SEQ ID NO:38

```
Met Val Val Val Glu Glu Phe Phe Val Ser Tyr Arg Asp Ile Leu Lys
1               5                   10                  15

Ala Leu Gln Asp Glu Lys Ile Ser Phe Glu Glu Ala Lys Tyr Lys Leu
            20                  25                  30

Ile Lys Arg Lys Asp Lys Lys Ser Lys Gln Arg Leu Asn His Asp Arg
        35                  40                  45

Glu Leu Asn Arg Ser Met Asn Ile Thr Pro Lys Ile Val Asn Asn Tyr
    50                  55                  60

Gly Leu Val Leu Leu Gly Gly His Leu Phe Glu Glu Leu Arg Leu Ser
65                  70                  75                  80

Glu Trp Lys Ala Ala Asn Pro Asn Glu Val Ser Ile Gln Val
            85                  90                  95

Lys Ala Ser Ala Ile Ser Phe Thr Asp Thr Leu Cys Val Gln Gly Leu
            100                 105                 110

Tyr Pro Ser His Tyr Pro Phe Val Pro Gly Phe Glu Val Ser Gly Val
        115                 120                 125

Ile Arg Gln Val Gly Glu His Ile Thr Asp Leu His Val Gly Asp Glu
        130                 135                 140
```

FIG. 22DD

Val Ile Ala Phe Thr Gly Ser Ser Met Gly Gly His Ala Ala Tyr Val
145 150 155 160

Thr Val Pro Gln Asp Tyr Val Val Arg Lys Pro Lys Asp Leu Ser Phe
165 170 175

Glu Asp Ala Cys Ser Phe Pro Leu Ala Phe Ala Thr Val Tyr His Ser
180 185 190

Phe Ala Arg Gly Lys Leu Ser His Asn Asp His Ile Leu Ile Gln Thr
195 200 205

Ala Thr Gly Gly Cys Gly Leu Met Ala Leu Gln Leu Ala Arg Leu Lys
210 215 220

Gln Cys Val Cys Tyr Gly Thr Ser Ser Arg Glu Asp Lys Leu Ala Leu
225 230 235 240

Leu Lys Gln Trp Ala Leu Pro Tyr Val Phe Asn Tyr Lys Thr Cys Asn
245 250 255

Ile Asp Glu Glu Ile Gln Arg Val Ser Gly His Arg Gly Val Asp Val
260 265 270

Val Leu Asn Met Leu Pro Gly Glu His Ile Gln Gln Gly Leu Asn Ser
275 280 285

FIG. 22DD (cont'd)

```
Leu Ala Lys Gly Gly Arg Tyr Leu Glu Leu Ser Met His Gly Leu Leu
            290             295             300

Thr Asn Glu Pro Val Ser Leu Ser Ser Leu Arg Phe Asn Gln Ser Val
            305             310             315             320

Gln Thr Ile Asn Leu Leu Gly Leu Leu Asn Lys Gly Asp Asp Gly Phe
            325             330             335

Ile Gly Ser Val Leu Ala Gln Met Val Ser Trp Ile Glu Ser Gly Asp
            340             345             350

Leu Val Ser Thr Val Ser Arg Ile Tyr Pro Leu Asp Gln Ile Gly Glu
            355             360             365

Ala Leu Arg Tyr Val Ser Glu Gly His Ile Gly Lys Val Val Val
            370             375             380

Ser His Thr Ala Thr Glu Pro Met Asp Cys Arg Gln Arg Cys Ile Asp
            385             390             395             400

Asn Val Leu Lys Gln Gly Gln Met Ala Ala Leu Thr Ala Thr Gly Gly
            405             410             415

Lys Ser Arg Val Trp Gly Gly Thr Gly Val Asn Asp Lys Pro Ser Pro
            420             425             430
```

FIG. 22DD (cont'd)

Ala Val Gly Ile Glu Glu Arg Leu Leu Glu Gly Ile Ala Val Ile Gly
435   440   445

Leu Ser Gly Gln Tyr Pro Lys Ser Lys Thr Leu Glu Gln Phe Trp Gln
450   455   460

Thr Leu Ala Asp Gly Val Asp Cys Ile Ser Glu Ile Pro Ala Asp Arg
465   470   475   480

Trp Ser Leu Glu Glu Tyr Tyr Ser Pro Ile Pro Glu Gly Gly Lys Thr
485   490   495

Tyr Cys Lys Trp Met Gly Val Leu Glu Asp Met Asp Cys Phe Asp Pro
500   505   510

Leu Phe Phe Ala Ile Ser Pro Arg Glu Ala Glu Val Met Asp Pro Gln
515   520   525

Gln Arg Leu Phe Leu Glu Asn Ala Trp Ser Cys Ile Glu Asp Ala Gly
530   535   540

Ile Asn Pro Lys Met Leu Ser Arg Ser Arg Cys Gly Val Phe Val Gly
545   550   555   560

Cys Gly Ala Asn Asp Tyr Ser Ala Leu Met Asn Ser Ser His Ser Thr
565   570   575

FIG. 22DD (cont'd)

Ser Leu Glu Leu Met Lys Glu Leu Gly Asn Asn Ser Ser Ile Leu Ser
580 585 590

Ala Arg Ile Ser Tyr Phe Leu Asn Leu Lys Gly Pro Cys Leu Ala Ile
595 600 605

Asp Thr Ala Cys Ser Ser Ser Leu Val Ala Ile Ala Glu Ser Cys Asn
610 615 620

Ser Leu Val Leu Gly Thr Ser Asp Leu Ala Leu Ala Gly Gly Val Leu
625 630 635 640

Leu Met Pro Gly Pro Ser Leu His Ile Gly Leu Ser His Gly Glu Met
645 650 655

Leu Ser Val Asp Gly Arg Cys Phe Thr Phe Asp Gln Arg Ala Asn Gly
660 665 670

Phe Val Pro Gly Glu Gly Val Gly Val Val Leu Leu Lys Arg Met Ser
675 680 685

Asp Ala Val Arg Asp Gly Asp Pro Ile Arg Ala Val Ile Arg Gly Trp
690 695 700

Gly Val Asn Gln Asp Gly Arg Ser Asn Gly Ile Thr Ala Pro Ser Ser
705 710 715 720

FIG. 22DD (cont'd)

Lys Ala Gln Ser Ala Leu Glu Gln Glu Val Tyr Gln Arg Phe Asn Ile
725   730   735

Asp Pro Ser Ser Ile Thr Leu Val Glu Ala His Gly Thr Gly Thr Lys
740   745   750

Leu Gly Asp Pro Ile Glu Val Glu Ala Leu Ala Glu Ser Phe Arg Val
755   760   765

Tyr Thr Asp Lys Arg His Tyr Cys Ala Leu Gly Ser Val Lys Ser Asn
770   775   780

Ile Gly His Leu Gly Val Gly Ala Gly Ile Ala Gly Val Thr Lys Val
785   790   795   800

Leu Leu Ser Leu Gln His Arg Met Leu Pro Pro Thr Ile His Cys Glu
805   810   815

Asp Val Asn Pro Gln Ile Ala Leu Glu Gly Ser Pro Phe Tyr Ile Asn
820   825   830

Thr Glu Leu Lys Pro Trp Gln Ser Gly Asp Ser Ile Pro Arg Arg Ala
835   840   845

Gly Val Ser Ser Phe Gly Phe Ser Gly Thr Asn Ala His Leu Val Leu
850   855   860

FIG. 22DD (cont'd)

Glu Glu Tyr Leu Pro His Ser Thr Gly Thr Ile Glu Ser Phe Ala Ala
865   870   875   880

Asn His Ala Ser Thr Val Ile Ile Pro Leu Ser Ala Lys Ser His Asn
885   890   895

Ser Leu Tyr Thr Tyr Ala Gln Thr Leu Leu Ile Phe Leu Lys Arg Ser
900   905   910

Gln Val Thr Asp Ala Lys Lys Ile Thr Leu Asp His Met Glu Cys Arg
915   920   925

Leu Leu Asp Leu Ala Tyr Thr Leu Gln Val Gly Arg Glu Ala Met Asp
930   935   940

Lys Arg Ile Ser Phe Ile Val Asn Thr Lys Gln Ala Leu Val Glu Lys
945   950   955   960

Leu Asn Ala Phe Leu Glu Lys Glu Lys Thr Ile Thr Asp Cys Tyr His
965   970   975

Tyr Leu Phe Asp Ser Asp Lys Pro Ser Thr Glu Ile Phe Arg Leu Asp
980   985   990

Glu Asp Asp Lys Val Leu Ile Asn Ser Trp Ile Ser Gln Ser Gln Tyr
995   1000   1005

FIG. 22DD (cont'd)

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His Lys Leu Ala Glu Ala Ala Trp Ser Gln Gly Leu Asp Ile Asp Trp Thr
1010                     1015                    1020

Leu Leu Tyr Thr His Ser Ser Thr Pro Arg Arg Ile Ser Leu Pro Thr
1025                    1030                    1035            1040

Tyr Pro Phe Ala Arg Asp Arg Tyr Trp Leu Pro Glu Lys Pro Arg Tyr
                1045                    1050                    1055

Asn Ala Ala Asn His Pro Val Ser Asn His Gln Thr Thr Thr Gln Asn
1060                    1065                    1070

His Ser Arg Phe Ala Ile Asp Thr Asp His Asp Val Val Ala Glu Ile
        1075                    1080                    1085

Met Gln Lys Thr His Gln Gln Glu Leu Glu Gln Trp Leu Leu Lys Leu
1090                    1095                    1100

Leu Phe Val Gln Leu Gln His Met Gly Leu Phe Gln His Arg Val Phe
1105                    1110                    1115            1120

Glu Thr Ala Thr Ala Leu Arg Gln Ser Ala Gly Ile Val Asp Lys Tyr
                1125                    1130                    1135

Asp Arg Trp Trp His Glu Cys Leu Ser Val Leu Gln Asp Ala Gly Tyr
1140                    1145                    1150
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FIG. 22DD (cont'd)

Leu Glu Trp Lys Asp Asp Ser Val Ala Ala Ala Gln Ala Leu Glu Ser
1155   1160   1165

Glu Ser Gln Glu Ala Trp Trp Ser Arg Trp Asn Thr Glu Tyr Lys His
1170   1175   1180

Tyr Gln Asn Asp Pro Glu Lys Lys Thr Leu Ala Ile Leu Ile Asn Asp
1185   1190   1195   1200

Cys Leu Gln Ala Leu Pro Gly Val Leu Ser Gly Glu Gln Leu Ile Thr
1205   1210   1215

Asp Ile Ile Phe Pro Asn Gly Ser Met Glu Lys Met Glu Gly Leu Tyr
1220   1225   1230

Lys Asn Asn Arg Ile Ala Asp Tyr Cys Asn Gln Cys Val Gly Asp Leu
1235   1240   1245

Leu Val Gln Phe Ile Glu Ala Arg Leu Ser Arg Asp Ala Asn Ala Arg
1250   1255   1260

Ile Arg Ile Ile Glu Ile Gly Ala Gly Thr Gly Gly Thr Thr Ala Ile
1265   1270   1275   1280

Val Leu Pro Met Leu Gln Ala Tyr Gln Asp His Ile Asp Thr Tyr Cys
1285   1290   1295

FIG. 22DD (cont'd)

Tyr Thr Asp Val Ser Lys Ala Phe Leu Met His Gly Gln Glu His Tyr
1300   1305   1310

Gly Glu Gln Tyr Pro Tyr Leu Ser Tyr Cys Leu Cys Asn Ile Glu Gln
1315   1320   1325

Asp Leu Val Ala Gln Gly Ile Ser Val Gly Asp Tyr Asp Ile Ala Ile
1330   1335   1340

Ala Ala Asn Val Leu His Ala Thr Arg Asn Ile His Glu Thr Val Ser
1345   1350   1355   1360

His Val Arg Gln Ala Leu Ala Ala Asn Gly Leu Leu Ile Leu Asn Glu
1365   1370   1375

Phe Ser Gln Lys Ser Val Phe Ser Ser Val Ile Phe Gly Leu Ile Asp
1380   1385   1390

Gly Trp Ala Leu Ser Glu Asp Thr Gly Leu Arg Ile Pro Gly Ser Pro
1395   1400   1405

Gly Leu Tyr Pro Lys Gln Trp Gln Ala Val Leu Glu Ala Ser Gly Phe
1410   1415   1420

Gly Asp Val Glu Phe Pro Leu His Asp Ala Arg Glu Leu Gly Gln Gln
1425   1430   1435   1440

FIG. 22DD (cont'd)

Ile Ile Leu Ala Thr Asn Ala His Ala Asn Val Ala Ser Asp Leu Ala
1445   1450   1455

Thr Ser Val Ile Asp His Ala Pro Lys Arg Leu Pro Ser Ala Glu Val
1460   1465   1470

Ser Met Asp Glu Arg Val Ser His Asp Ala Met Met Lys Ala Ser Val
1475   1480   1485

Lys Gln Leu Leu Val Glu Gln Leu Ser Gln Ser Leu Lys Leu Asp Met
1490   1495   1500

Asn Glu Ile His Pro Asp Glu Ser Phe Ala Asp Tyr Gly Val Asp Ser
1505   1510   1515   1520

Ile Thr Gly Ala Ser Phe Ile Gln Gln Leu Asn Asp Thr Leu Thr Leu
1525   1530   1535

Thr Leu Lys Thr Val Cys Leu Phe Asp His Ser Ser Val Asn Arg Leu
1540   1545   1550

Thr Ala Tyr Leu Leu Ser Asp Tyr Gly Asp Asp Ile Ala Gln Trp Leu
1555   1560   1565

Ala Thr Ala Pro Ala Leu Val Asp His Pro Gln Ser Val Val Ser Gln
1570   1575   1580

FIG. 22DD (cont'd)

Val Leu Pro Glu Arg Ser Pro Ala Ser Thr Gln Ala Lys Pro Leu Pro
1585   1590   1595   1600

Ser Val Pro Pro Ser Leu Ser Met Glu Ser Pro Val Gln Gln Glu Ser
            1605   1610   1615

Ile Ala Ile Ile Gly Met Ser Gly Arg Phe Ala Ala Ser Glu Asn Leu
        1620   1625   1630

Glu Ala Phe Trp Gln Gln Leu Ala Gln Gly Val Val Asp Leu Val Glu Pro
    1635   1640   1645

Ala Ser Arg Trp Gly Pro Gln Ala Glu Thr Tyr Tyr Gly Ser Phe Leu
1650   1655   1660

Lys Asp Met Asp Gln Phe Asp Pro Leu Phe Phe Asn Leu Ser Gly Val
    1665   1670   1675   1680

Glu Ala Ser Tyr Met Asp Pro Gln Gln Arg Cys Phe Leu Glu Glu Ser
            1685   1690   1695

Trp Asn Ala Leu Glu Asn Ala Gly Tyr Val Gly Asp Gly Ile Glu Gly
        1700   1705   1710

Lys Arg Cys Gly Ile Tyr Ala Gly Cys Val Ser Gly Asp Tyr Ala Gln
    1715   1720   1725

FIG. 22 DD (cont'd)

Leu Leu Gly Asp Gln Pro Pro Pro Gln Ala Phe Trp Gly Asn Ala Ser
1730   1735   1740

Ser Ile Ile Pro Ala Arg Ile Ala Tyr Tyr Leu Asn Leu Gln Gly Pro
1745   1750   1755   1760

Ala Thr Ala Val Asp Thr Ala Cys Ser Ser Ser Leu Val Ala Val His
1765   1770   1775

Leu Ala Cys Gln Ala Leu His Leu Asp Glu Met Glu Met Ala Leu Ala
1780   1785   1790

Gly Gly Val Ser Leu Tyr Pro Thr Pro Ile Ile Val Glx Val Phe Ala
1795   1800   1805

Trp Cys Arg Tyr
1810

FIG. 22DD (cont'd)